STABLE WASTE, FLY AND VECTOR CONTROL PLAN

OSUNA RANCH

May 2008

Major Use Permit Case #PO7-012

Site Location:
16332 Via de Santa Fe
Rancho Santa Fe, CA 92067

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INTRODUCTION

This Manure Management Plan and Fly/Vector Prevention and Management Plan has been created in consultation with the San Diego County Department of Environmental Health, Vector Surveillance and Control Program. It is an attempt to plan for the minimization of flies, mosquitoes, rodents and other pests that may breed in stable wastes, water troughs or be attracted to supplies of feed. This plan is created to meet the requirements of the Major Use Permit for the Osuna Ranch. (Exhibit I, Location Map)

The San Diego County Code general requirements for garbage and organic wastes are for weekly removal except as approved by the Director of Environmental Health. This plan requests an exemption of weekly removal for 100% of the manure. For the purpose of this plan, the volume is limited to the daily waste for 50 horses. The expected number of truck loads or dumpster loads will be determined. In general, 100% will go to a sanitary landfill. DEH has been asked to make an annual inspection to verify that the Vector Control and Manure Management Plan is being followed.

Principles of Integrated Pest Management (IPM) will be used with little or no use of pesticides. Timely removal of wet manure will be the basis of fly and odor control. There will also be an alternative or wet weather plan.

The control and removal of horse manure and management of any pesticides used on the property is also of interest to the Department of Public Works, the DEH Storm water program and the Regional Water Quality Control Board.

The principles are to be followed by staff and tenants in order to maintain the health and safety of the tenants, horses, guests and surrounding property owners.

The components of the plan include guidelines for manure removal, control of water around the stables, general sanitation and the possible use of chemicals for insect and rodent control.

The Management Plan

The Management Plan is designed to:

1. Minimize fly production
2. Reduce Odors
3. Minimize manure content and sediment in storm water runoff
4. Create better public relations

PROPERTY DESCRIPTION

The property consists of 28 acres. Approximately 24 acres consist of fenced open space, pastures and turn outs. There are currently 44 horses on the property. There are no ponds or large water storage containers on the property.

EQUESTRIAN USES

Stables	
Main Barn	17 stalls
Far Barn	10 stalls
Barn A	3 stalls
Barn B	3 stalls
Paddocks	9 (uncovered)
Paddocks	2 (covered)
Stallion Paddock with stall	1
Turn Outs	12 (two with shelters)
Pastures	4
Hay Barn	1
Arena/Jumping Ring	1
Shaving Storage	1
Tack Rooms	4
Restroom	1
Maintenance Shop	1
Training Ring	1
Horse Trailer Parking	4
Covered Viewing Area	1
Office	1
Wash Racks	2
Tie-Racks	8
Jump Storage Barn	1
Parking	50
Grain Storage Room	1

Education: Staff will be given instructions on the importance and methods of managing fly, mosquitoes and rodents. The fly breeding cycle will be explained and management will stress the importance of breaking the fly breeding cycle within 7 days. The importance of best management practices and integrated pest management will be reviewed to understand what staff could do to protect the watershed and water supply.

a. Areas of wet manure in the stables and paddocks will be "mucked out" daily and removed to the manure storage area.
b. Manure will be removed from pastures and turn-outs on a weekly basis to prevent fly breeding and reduce storm-water runoff. Good drainage is always to be maintained around any temporary storage site for manure. Storm water BMP devices such as dirt

berms, sand bags, check dams and vegetated swales shall be used on the ephemeral streams draining away from the manure storage area and parking lots. Additional storm water prevention measures will be included as conditions of permit approval.

c. Manure will be removed to a sanitary landfill on a weekly basis.

NOTE: In winter, it may be necessary to cover the manure pile with plastic tarp to prevent wetting and fly emergence. Covering the manure will also reduce storm water runoff.

STABLES WASTE PLAN

The manure management plan has been created based on the San Diego County Code for general requirements for garbage and organic wastes. 100% of the horse manure from approximately 50 horses is removed to a sanitary landfill on a weekly basis. Stalls and outside paddocks are cleaned daily. There is no manure recycled for soil amendment. Principles are followed by staff and tenants in order to maintain the health and safety of tenants, horses, visitors and surrounding properties.

In addition to the manure, all garbage and bedding are removed to a sanitary landfill on a weekly schedule.

WATER MANAGEMENT METHODS

There are no pools, ponds, large water storage containers or standing water on the property. There are 23 barn stalls and 9 outside paddocks with automatic waters that are cleaned once a week. Tubs and buckets are used for the other stalls and outside paddocks. All tubs contain goldfish and mosquito fish (gambusia affinis) which consume insect larvae. Tubs and buckets are cleaned on a weekly basis.

Feed managers and bins are not located near water sources because spilled feed attracts flies and rodents.

The accumulation of damp manure, bedding or feed shall be avoided. The following are some guidelines for effective reduction of these fly sources:

a. Use non-leak valves on all water troughs, bowls and other devices.
b. Use automatic valves or sanitary drains for large troughs if water flow is continuous
c. Properly grade earth surfaces in paddocks and corrals for drainage. Adapt surfaces to a drainage pattern so that rainwater of water trough overflow does not form ponds.
d. Staff will be requested to report and repair all water leaks to prevent unnecessary wet manure areas which are mosquito breeding areas.

e. At least once a week, staff will check watering devices to be sure they are working properly and that they are not breeding mosquitoes. If mosquito breeding is found, the water container shall be emptied, cleaned and filled with fresh water.

GENERAL SANITATION MANAGEMENT METHODS

A general clean up program shall supplement the manure and water management efforts. Good sanitary methods around barns, arena and all stable grounds shall pay attention to the following items:

a. Use as little bedding material as possible.

b. Remove damp or spilled feed from around bins, tanks and manger bottoms.

c. Store all garbage, fruit and vegetable wastes and pet droppings in tight lid containers until off-grounds disposal is possible.

d. Isolate compost clippings, leaves and garden pruning in fly-tight bins or remove once per week for off site disposal.

e. Control weeds in order to improve sun penetration and air movement so that the grounds remain dry and to avoid breeding of flies, rodents, mosquitoes and other potential pests.

f. Feed should be stored in vector and rodent-proof containers.

g. Stables users should maintain sanitary conditions on a daily basis.

FEED STORAGE

Alfalfa and Bermuda grass hay are stored in a hay barn. The barn has a cement floor which is swept daily. The hay feed is rotated first in first out. Grains and pellets are used by individual horse owners and stored in metal containers in the grain storage room. No grain, hay or pellet storage is permitted in the barn aisles because of possible spillage which attracts rodents, flies and other pests.

RODENT CONTROL

No use of pesticides is planned in the operation of the stables. If rodent baits are used in the future, they shall be contained in approved tamper resistant bait stations to provide a safeguard for people, pets and other animals. All bait stations will be properly labeled. The Osuna Ranch will retain qualified pest control personnel who will periodically monitor the presence of pests and take corrective action.

Good sanitation effectively limits the number of rats and mice. This involves proper storage of grains and feed, removing clutter and materials that provide harborage of rodents, and regular inspection for signs of rats and mice.

For the control of rats and mice, Rat Zappers and Victor Electronic Mouse and Rat traps are used in tack rooms, feed rooms, hay storage barn and in the jump storage barn. These traps are checked and emptied on a regular basis. Rodents are disposed in a plastic bag that is tightly sealed and disposed of in trash containers with tight fitting lids.

Birds of prey are also important and effective in controlling the rodent population. Eight Owl nesting boxes have been placed appropriately throughout the property. These nesting boxes are cleaned and emptied in late spring and fall. Hawks, Egrets, Kites and other birds of prey also frequent the property in search of rodents and invertebrates.

FLY CONTROL

The property does not use pesticides for fly control. Any tall grasses and weeds are cut on a regular basis to eliminate fly breeding areas. PDZ is applied to urine soaked areas to neutralize the wet areas which helps prevents flies. The property also has a very large population of barn swallows. These insect-eating birds consume large quantities of gnats and flies.

Proper care and management of waste feed and manure greatly helps reduce the fly population. Any uneaten hay in the stalls or the paddocks is removed daily. Wood shavings, which are cleaned of manure and urine soaked areas daily, are used for stall bedding.

PESTICIDES AND LARVICIDES

No use of pesticides is planned in the stable operation. If manure management is found inadequate at times, this plan may be revised to contain some low toxicity chemical controls. Consultation will be made with the appropriate agencies prior to use.

Technical information from University of California Agricultural Bulletin 2335. Correctly chosen and applied chemicals may be a necessary supplement to good sanitation, manure and water management. Insecticides and chemical formulations which best suit the stables needs may include:

a. Persistent insecticides, when applied as surface spray are usually the most effective and economical compounds for controlling fly.

b. A quick knockdown insecticide, applied as a surface spray, is advantageous if immediate reduction of adult flies is necessary.

c. Baits are generally most effective when applied at the same time as surface sprays.

d. Space sprays or fogs are most valuable when quick kills of large numbers of flies and insects are desired in enclosed areas.

e. Larvicides are best used as spot treatments to control fly larvae in wet areas and manure storage areas.

CONCLUSION

Basic ranch management practices that reduce common pest attractants and conditions favorable to fly, insect and rodent breeding are the key to successful control in the following areas:

a. Manure management includes prompt collection, storage and disposal.

b. Water management includes clean, controlled supply and good drainage with the use of appropriate storm water Best Management Practices to promote watershed protection.

c. Minimal use of chemical pest control as necessary.

d. BMP's will be used to prevent storm water runoff with excess sediment and manure.

e. General sanitation includes proper disposal of organic debris and trash.

Any changes in this plan will be made with consultation and approval of San Diego Department of Environmental Health Services, Vector Control.

Manager _____ _____

Owner RANCHO SANTA FE ASSOC. _____

Reviewed and Approved by:

_____ _____

Department of Environmental Health
Vector Surveillance and Control